Evaluating the Content of Web Sites

Guidelines for Educators

Environmental Education and Training Partnership

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Section I: Introduction

There is a tremendous amount of information available on the World Wide Web. Some of this information is good, sound research data; some is opinion. Some of the data are there for information; some for persuasion. When a person, whether a student, teacher, researcher, businessperson, or interested individual searches the World Wide Web, the sheer volume of information can be overwhelming. Further, any search may or may not lead the individual to the specific information source they seek.

How can an individual determine the appropriateness or validity of the information they're finding? This has been an issue of great discussion over the past few years. Much of the use of the Web in education has been criticized for allowing information from the Web to be used by students without critical consideration. Several projects, especially in libraries throughout the U.S., have focused on ways of evaluating web sites. This document is a reference tool for educators to use in preparing students to think critically on the use of the Web. The criteria laid out within this document come from a broad array of sources. A list of these sources and additional sites and bibliographies is included in Section V.

As Environmental Education stresses "how to think, not what to think," it is appropriate that this document is developed through the Environmental Education and Training Partnership (EETAP), a five year project funded by the U.S. Environmental Protection Agency, Office of Environmental Education and managed by the North American Association for Environmental Education.

As you prepare to use this guide, there are a few basic assumptions that should be made clear.

> *Evaluating a site means applying individual judgement.* The purpose of this guide is not to define what sites are "good" and what sites are "bad," but rather is to help teachers and their students learn to assess the value of a site in terms of quality of information and usability of web-based information as resources for learning.
>
> *Not all information is created equal.* Information on the web is not the same as articles in academic journals, textbooks, or other sources of scientific data. In the print media, articles go through often extremely rigorous, blind peer reviews by experts. Anyone can put information on the web.
>
> *There is good information on bad sites, and bad information on good sites.* The purpose of evaluating the content of a site is to determine how to best use the information on the site. Sometimes, opinions or even biased data have an important role in rigorous inquiry— we need to know what different opinions and biases are in order to better understand the complex issue at hand.
>
> *Information on the Web should be viewed as no more or less than information from other sources.* Just because something is on the web does not mean it is so. Some librarians

suggest "triangulating" data from the web with other sources. This may be comparing information from multiple sites on the web AND in textbooks, encyclopedias, reference books, or journals. Just as we would frown upon using one article or one encyclopedia for a report, we should frown upon using information from one site (or series of links from one site) for a report.

The student or individual evaluating the content on a web site has a bias in how they view the information. All of us have beliefs, values, and opinions about different topics. When seeking for information, we naturally tend to accept as authority information that supports our point of view and dismiss the authority of information that contradicts or counters our beliefs. As we evaluate sites, we need to be aware of our own bias in interpreting the site's information.

Authorship on the Web does not mean "authority." Anyone can put information or opinion on the web. Just because the information is there, even if the author is identified, does not mean the author is an expert or an authority in the subject.

Evaluation of web sites is a means, not an end. The purpose in helping students learn to evaluate the content of a web site is critical-thinking. The idea is to get students or users used to asking questions— not to conduct an evaluation. The information in this guide is to help you start students with evaluation of sites they use. As they become more proficient, they should be able to ascertain the quality of information without using a guideline or form.

There are two different types of evaluations of sites: evaluation of the site itself, and evaluation of the content. Though in some ways interrelated, these are quantitatively and qualitatively different activities and characteristics of sites. This guide will focus on the "content" aspect and briefly touch on the construction of the site itself.

This guide is divided into five sections:

Section I:	Introduction
Section II:	Criteria for Evaluating Content of Web Sites
Section III:	Criteria for Evaluating Construction of Web Sites
Section IV:	Sample Evaluation Guides
Section V:	On-line Bibliographies; On-line information sources

Section II: Criteria for Evaluating Content of Web Sites

Different library-based sources of evaluation criteria for web sites provide slightly different ways of looking at the content of a web site (see bibliography for examples). Yet, all these differences are variations on a few central ideas. The following discussion has lumped the various ideas into five broad categories. For your work, you may wish to focus more on certain criteria and perhaps even separate concepts from one category into multiple categories. For example, some educators may wish to separate "author" from "authority" and have students view these as two distinct, though sometimes overlapping, concepts.

A review of dozens of sites discussing content evaluation seemed to have at the center five general themes: 1) Authority; 2) Audience; 3) Context/Coverage; 4) Accuracy; and 5) Currency.
Each of these will be discussed later

Together, these five themes create a base for determining how to use information from a web site. Whether for personal use ir for a report, a student can learn to ask these basic questions to ascertain how much credibility they choose to assign to the information found on a web site. These are good questions to ask regardless of the reason for obtaining information from the web.

Following, each of these key themes will be discussed in greater detail. How much emphasis to place on each theme should be determined by the purpose for obtaining and/or use of the information being sought.

Five Key Themes for Evaluating Information on the WEB

__ Authority
Who wrote the information? Who manages the site? What are their specifications?

__ Audience
What is the purpose of the site? For whom is the information geared? Is the information appropriate?

__ Context/Coverage
Why is this site on the Web? What is the bias of the site? How thorough is the information? What sites are linked?

__ Accuracy
Is the site using "good information/science"? Are sources identified? Can you verify the information?

__ Currency
Is this current information or current thought? Are data reported timely? Is the site maintained regularly?

Authority

Authority refers to the credibility and expertise of the purveyor of the information on the web site. There are two levels of authority at play: the authority of the author, and the authority of the web site (publisher) which may or may not be the same. Some of the considerations are the same for both the author and the publisher, but both of these need to be considered. For example, a site on endangered species may have a link to an article from a scientist at World Wildlife Fund and both the author and the site need to be considered.

Questions about Authority

Who is responsible for the content (The author? The publisher?)
What is the level of authority of the author or the publisher (Is this their own research? Is the information research based?)
What is the affiliation of the author? Who is the author's employer? Who sponsors or pays for the author's work? Is this affiliation clear on the web site or is it hidden?
What is the relationship or association between the author and publisher?
What is the reputation of the publisher?
Is there contact information for questions?
Is the information on the author or the publisher verifiable?
Who developed the site?
Who is the sponsor/what is the location of the site?

There are several tips for determining some of the information about the authority on the site. One idea is to examine the domain name of the site. The type of site often identifies the point of view likely to be taken by the site.

Domains on the Web

The domain of "edu" is limited to education based sites; "org" is used by organizations and includes not-for-profits that often have a reason or "bias" for the site (not necessarily negative); "gov" refers to government agencies; "com" is used for commercial or corporation sites; and "isp" is often an individual's site and stands for Internet Service Provider.

Look for information about the author or publisher. If the address ends with "html," back up to get information about the site. If the page is a dead link (it doesn't go back to a home page or reference about the publisher or author), there might be reason to suspect the authority or relationship of the site publisher to the author.

The purpose of knowing about the author or the publisher is to put the purveyor of the information in context (see below for more about context). Knowing more about the organization or the author will help the researcher make better decisions regarding the information provided.

Just because you may have heard of an organization or an author does not mean you should accept or reject the information. Often, information and data can be interpreted from different perspectives; complex environmental issues often have contrasting information that can at first appear to be contradictory— the classic comparison of apples and oranges. The purpose in knowing about the author and/or publisher is to have a basis by which to analyze the information they present. Is the author or publisher respected within the scientific community? Is the author or publisher widely used as a source of information on this topic? Who agrees with the author/publisher? Who disagrees?

Although there may be some good information from sites without high credibility, primary reliance for data should be from highly credible sources. Prestigious sources or databases subscribed to by libraries or academic institutions are highly reliable. Choose sources from established publishers over ones with little history or reputation. Use reference books in the library to learn more about publishers. Information from government agencies, trade and professional associations, and major universities/research centers are considered reliable. This action does imply a bias against new sites and databases, but as in textbook science, there is more accountability over time with established sources than with relatively new sources.

Remember, even agencies and universities have a bias in their writing and research. The bias may be appropriate, but should be considered in comparing data and information.

Audience

A second important consideration on evaluating the content of a web site is to determine the audience for the page or site. Some sites are for academics or researchers and may be too complex for your needs (but may also be more reliable). Some sites are for the general public who may be looking for general information on a topic. Some of the questions you might ask include:

Questions about the Audience

Is the purpose of the site made clear? (For example, is the purpose to get people involved in a campaign? Or is the purpose to get people angry about a topic? These would be indicators of target audiences)
Is the target audience identified? Is it for specialists? An interested individual? A casual web surfer?
Is the content, reading level, graphic presentation and organization appropriate for the content and the audience?
Does the information meet the needs of the intended audience? Is it enough information? Too much?

One of the tricks to identifying the intended audience is to examine the site based on content, tone, and style and to consider what the reader is expected to do with the information. A site that has a "call for action" is usually not just information based or researcher oriented. Rather, such a site is advocacy and will have such a slant to the information.

Context/Coverage

Context is the setting in which the information is embedded. A report from a reputable scientist on a site that is advocating a political action does not reduce the credibility of the scientist's writing, but may provide insight into what the publisher of the site chose to present or how they choose to present the information. Coverage refers to the depth or breadth of the information provided. Context may provide insight into bias inherent in the information available on line at that site.

Questions about Context/Coverage

What is the persuasive approach used, if any?
Are there emotional arguments presented for the information?
Is there one point of view presented? Are there multiple perspectives offered?
Is there evidence of bias?
Are there linkages to other sites that have discussions on this topic?
Are links to other sites restricted to sites that only agree with the point of view offered in the site you're examining?
Does the site or the article provide sources for the information and then link to those sources?
Is the discussion in depth on the topic or superficial?

Some key words can be used to indicate potential bias. Words such as "should" or "clearly," "you know" or "most people agree," "need" or "vital/important," often indicate a persuasive argument is being used. Emotional arguments often rely on scare tactics or shock tactics to convince readers to believe their position. Showing multiple points of view requires providing a balance of information, often without a conclusion (therefore, you should...). One way of identifying bias in information is to find passages that have phrases such as "some studies show" and follow that with "however" or "according to some researchers" followed by a statement like "This is not so!" or "These researchers have overlooked important facts" or similar dismissive phrases.

Bias is also indicated by misleading statements, or outrageous, unsupported claims. Evidence of inaccuracy may include obviously hasty preparation of the article or the web page and inconsistent quality. Spelling, grammar, and text errors may indicate sloppy preparation and sloppy information.

Environmental issues are very complex and involve environmental, economic, political, social, cultural, and scientific concerns. A solid discussion on a topic should include multiple perspectives from a variety of views. However, some very good information from experts and reliable scientists and institutions may limit their information to one point of view. This doesn't mean the information is wrong, but it may suggest that the visitor to the site explore other sources to get a "full picture."

The links from one site to others is an excellent indicator of the point of view of the site. What types of organizations are linked? What positions do those sites hold? How are the sites related? What is the credibility of the sites for which links are made?

Accuracy

Perhaps the piece of evaluating information with which we are most comfortable, is that of accuracy. Is the information up-to-date? Are the data appropriately detailed? How exact and comprehensive are the data?

Questions about Accuracy

Are studies/sources of data referred to and obtainable (on-line or through a library)?
Does the information avoid general statements such as "research suggests" or "many scientists believe" without citations?
Are there comparison data or studies available and mentioned?
Is the methodology used described and appropriate?
Has the document been subjected to a peer review process? How could you know this?
Are the data primary (original research) or secondary (modified, selected, or reported from another study)?
Is there a bibliography or references cited section?
Is the site maintained by a university, governmental agency, or other reputable organization?

The key to accuracy is in being able to verify the data. Citations and original data are valuable tools for the researcher in being able to "double check" the accuracy of the report. The same tools used for evaluating the accuracy of hard-copy documents should be applied to the web.

Currency

The concept of currency relates to both the web site and to the data or information on the web site. Currency concerning the site itself will be discussed in the next section. The idea of currency of information is a bit more complex than just "is it recent." To be current, information does not have to be "new"-- sometimes older information is still agreed upon as valid and reliable. For example, we don't need a current study to show that in the hydrologic cycle, water precipitates to earth in the form of rain, snow, sleet, and dew. A more important construct in currency of data is the *relevance* of the information to society today. When discussing technology applications to education, for example, thirty plus years ago there was "computer aided instruction" which was very different than what the phrase means today. Technology has changed and so the teaching machines of the early 1960s are not what we consider computers today; as technology has changed, the relevance of the term has changed altering the currency of the phrase.

Questions about Currency

Is the information using the most currently available data (if using governmental data, secondary sources, and other non-primary data).
Is the information using primary data? If so, have there been subsequent studies verifying the data or the findings?
Is the information current— meaning does the information carry the weight of current agreement in the scientific community?
Are the data and the findings relevant today given changes in society, knowledge, or technology?

For articles or free standing documents that are placed on-line, there is often a publication date, especially on items from universities or scientific institutions. When dates are not indicated, a "sense" of the currency of the document can sometimes be garnered by looking at the dates of publications or data cited. The document *cannot* be older than the most current document used as a citation and is not likely to be more than two or three years newer than the most current data set unless explained in the text.

Government data are often two to three years behind the date. In other words, the most current data may be dated two or more years ago. This does not mean the data are not "good" or "valid." There is an inherent lag between the gathering of the data and the preparation of the data into reports and published documents. Other data sources, such as the census, occur periodically and can only be as current as the last collection. There are census updates, which are estimates of changes, but these are estimates and some studies prefer to use the more "hard" data of the census.

The same can be true with other data sources. The gathering of the data may provide the date, but by the time the data are analyzed, reported and published, there may be upwards of two years. Many academic journals have long review periods and a backlog of articles to publish so some studies are delayed and then may appear older if the date is taken alone. The findings, however, may still be the most current. Therefore, it is important to consider the meaning of the research and compare the data and findings to other studies to determine if this is current information.

Section III: Criteria for Evaluation of Construction of Web Sites

> The purpose of this guidebook is primarily for evaluating information found on-line. However, it can be very difficult to evaluate the information without also evaluating the web sites themselves. This section will present some of the concepts for evaluation but without the detail of the previous section.

There are slightly different considerations when evaluating the web site itself. Although some of the criteria are the same, there are a few substantial differences. Concepts such as **audience** and **authority** are very similar and parallel questions can be asked in evaluating the site as in evaluating the information. A slight difference is the ability to identify who maintains the site and the ease with which the searcher has access to the individual (usually through an e-mail link). Important to the authority is "dead links" or those links that have no identifiable affiliation and do not link back to a homepage or a larger site.

The idea of **currency** related to the site itself should be noted in a footer that usually says something like "date last updated." **Context**, in the case of the web site, is the "framework" around the information. The site is usually the context for understanding the "slant" on information contained in the site. The same exploration reveals contextual bias for the site itself as well as who is the publisher and funder for the site. **Accuracy** is very much the same.

Some of the additional criteria for evaluating are listed and briefly discussed below.

Format and Appearance

This criterion relates to the design aspects of the site. One of the first questions to ask is "is the organization of the site easy to figure out? Do I know what's where on this site?" Similarly, one should be able to find the information where it is expected and not have to go through several pages to find the information. Do the navigation buttons lead where they should or do they take the searcher to information that is not expected?

Of course, basic design principles of layout, appropriate graphic use, speed of loading graphics, editing control (how careful is the site in terms of spelling, grammar, wordiness, etc), and general attractiveness and usability are all part of the format and appearance.

Functionality

How usable is the site? Functionality refers to the usefulness and user-friendliness of the site. The first questions asked regarding functionality relate to the appropriateness of the site to the searcher's needs— is this site going to have the information that is expected? Next, the searcher

should examine the homepage and deeper level pages in terms of ease in moving through the site and returning to the homepage. Is the site clearly identified? Does the site let you move easily from one page to another. As above, do the links take you where they should? Can you use the site as it is designed?

Searchability

Increasingly, sites are designed to let you search within the site without going to a provider's search engine. Evaluation of searchability is based on the complexity of the search, the numbers of modifiers able to be used in the search, the domains (author, title, subject, key words, word) used for searching, and the speed in which the search takes place. One trick to use to evaluate searchability— find names, titles, subjects, key words, and words from pages deep within the site. Return to the homepage and do searches to find those search terms you identified. Does the search take you to those pages?

Uniqueness

The concept of uniqueness is a double-edged one. In searching, we want both commonly accepted information and at the same time, we want sites that are unique. To evaluate uniqueness, we can ask questions such as: is the information common in *other* formats? Is the site easy/difficult to locate? Is this site/information unique to the net? Is this site/information unique *on* the net? Does this site/information compliment other materials?

Help for Visitors

In evaluating sites, the user-friendliness is important. There are the technical considerations (such as platforms required for access to or using different sites) and the graphics programs needed to view different sites. There are also expectations that have emerged as basic to sites. These include site searcher aides such as direct links to the site manager or authors (e-mail links); site visitor feedback or dialogue areas; help or search buttons at various or all pages/levels of the site; clearly identified home page return buttons on all pages; and clearly identified links within the page. Some sites are very clever and appealing, but the links to other pages may be lost within the graphics and so are not good for quick searching.

The numbers of links and the types of links from the site to other similar or related sites is an important consideration in evaluation. These links also will reveal the bias of the site or the purpose of the site.

Many of the citations in the bibliography have in-depth discussions on evaluation of web pages. These would be excellent resources to extend the evaluation of information to the context of the information. They would also be valuable if students are developing web pages.

Section IV: Sample Evaluation Guides

Several sites online have created evaluation guides or forms. Some of these follow. The purpose in presenting these is to give you ideas as to how you can best organize the questions important to and appropriate for your students to ask when evaluating the information from a site.

In a pilot test of the five concepts listed in Section III, the teacher used "fill in the blanks" for the form. For example, some questions on Authority looked like:

Who is the author? _____
Who (what organization) runs the Web site?_____
What is the author's affiliation?_____
Whose research is this information based on?_____
Can you contact the author? Y N address _____
Can you contact the web site? Y N address _____

After reviewing these different formats, you may wish to create your own evaluation form. One key piece of advice — test the form to be sure it obtains the information you want your students to find and leads to them asking the questions themselves.

Examples of Evaluation Instruments

Following are seven examples of evaluation tools used by different libraries. These examples are provided to demonstrate the range of ways in which evaluation criteria can be applied.

Example 1

From http://www.kovacs.com/ohionet/evalact1.html
1. Who provided the information? What is their Reputation as an Information Provider? 2. Does the information provider have the Authority or expertise to provide information on that topic? 3. Is the resource effected by currency or lack of currency? 4. When was the last update of the information?

From http://www.kovacs.com/ohionet/evalact2.html
5. What are their evaluation criteria? 6. Who is providing the Internet Resource rating service? Why? Commercial Gain? Altruism? 7. Are they meaningful in deciding the authority, accuracy, or timeliness of a given resource?

Example 2

From http://itech1.coe.uga.edu/Faculty/GWilkinson/criteria.html

Criterion 1: Site Access and Usability

Before the quality of a resource can be judged, it is necessary to locate and gain access to the server that houses the document(s). Site Access and Usability deals with the first impression the Web site makes on users and such issues as ease of connection and downloading, identification of the site, access restrictions, and other questions that must be dealt with before the information contained within the site can be used.

- 1.1 What is the name of the site?
- 1.2 What individual, group, or organization supports and/or maintains the site?
- 1.3 What is the URL of the site?
- 1.4 Is the site stable, or has the URL changed?
- 1.5 Which formats does the site support (VRML, Netscape 2.0, Gopher, etc.?)
- 1.6 Have different versions been produced to support a variety of browsers?
- 1.7 Is the document source code free of bugs and breaks?
- 1.8 Does the page take a long time to download?
- 1.9 Are graphics shown in in-line form for quicker downloading?
- 1.10 Is it usually possible to reach the site, or is it frequently overloaded or shut down?
- 1.11 Are any rules for use of the site or resources within the site stated up front?
- 1.12 Is it a commercial site that requires payment for full access?
- 1.13 If commercial, is the price specified up-front?
- 1.14 Is the user informed when the host site is collecting usage data?
- 1.15 Does the site require a log-on?
- 1.16 If required, is the use that will be made of log-on information described?
- 1.17 If involving confidential information, are interactions secured?
- 1.18 Is there a description of the traffic levels at the site?

From http://itech1.coe.uga.edu/Faculty/GWilkinson/criteria.html (continued)

Criterion 2: Resources Identification and Documentation

In order to begin the process of forming judgements about the quality of the information contained within a resource it is necessary to locate the document within the site and to gather descriptive information about the document. Resource Identification and Documentation deals with such information as the title and URL address of the document as well as descriptions of its content, its purposes, and its intended audiences.

- 2.1 What is the title of the document?
- 2.2 Within what major fields, disciplines, or topics does the document fall?
- 2.3 For what audience was the document designed?
- 2.4 What is the mission, purpose, or scope of the document?
- 2.5 Is there a description of the document's content?
- 2.6 Is the user informed of improper or controversial materials (e.g., adult language, sexually explicit material, gratuitous violence, etc.) Within the document?
- 2.7 When was the document created?
- 2.8 When was the document placed on the Internet?
- 2.9 Is there a description of the pattern for updates (e.g., weekly, annually, etc.)?
- 2.10 When was the document last revised?
- 2.11 Is the document stable, or likely to be replaced or removed from the site at any time?
- 2.12 If the resource is to be removed, does the site state where it will be available?
- 2.13 What is the URL of the document?

From http://itech1.coe.uga.edu/Faculty/GWilkinson/criteria.html (continued)

Criterion 3: Author Identification

Information about the author's qualifications is critical to the formation of judgements about the quality of information contained in Internet resources. Author Identification deals with descriptive information. Other individuals or organizations who sponsor or are in other ways involved in the production of the document should also be identified.

- 3.1 What is the author's name?
- 3.2 What is the author's professional or institutional affiliation?
- 3.3 What is the author's position title or academic rank?
- 3.4 What is the author's training or experience with the topic?
- 3.5 What is the author's e-mail address?
- 3.6 What is the author's phone number?
- 3.7 What is the author's mailing address?
- 3.8 Did other individuals, groups, or organizations provide assistance in the creative process?
- 3.9 Was the development of the document funded or otherwise supported by an individual, group, or organization other than the identified author?

From http://itech1.coe.uga.edu/Faculty/GWilkinson/criteria.html (continued)

Criterion 4: Authority of the Author

Judgements about the quality of information within a document are often related to the qualifications of the author(s) to present information on or opinions about the topic of the document, Authority of Author deals with such topics as the training, personal experience, institutional or organizational affiliations, or publishing record of the author(s) and how these relate to the substance of the document.

- 4.1 Is the author a recognized authority on the topic of the document?
- 4.2 Has the author published related materials dealing with the topic of the document?
- 4.3 Is the author's training appropriate and related to the topic of the document?
- 4.4 Is the author's experience appropriate and related to the topic of the document?
- 4.5 Is the author affiliated with an educational institution, research laboratory, governmental agency, or other reputable organization related to the topic of the document?

From http://itech1.coe.uga.edu/Faculty/GWilkinson/criteria.html (continued)

Criterion 5: Information Structure and Design

The usability of information is dependent on how it is organized as well as on its inherent quality. Information Structure and Design deals with how the document is structured and indicates whether the document follows accepted instructional design standards, such as stating its purpose, describing the scope, incorporating interactivity, or providing a variety of formats to meet different learning styles.

5.1 Is the scope of the document clearly stated?
5.2 Are the limits pf the document stated?
5.3 Is the title of the document descriptive of its content?
5.4 Are headings clear and descriptive or do they use jargon meaningful only to the author?
5.5 Does the content fit the stated scope, purpose, and audience?
5.6 Does the use of graphics and icons contribute to the clarity and usability of the information?
5.7 Is there a text alternative to the images?
5.8 Does the site offer a variety of features in addition to delivering content (e.g., provides e-mail links for further information, downloads, ordering, discussion lists)?
5.9 Is the document designed to meet individual audience needs (multiple development levels)?
5.10 Are the visual metaphors employed (icons) appropriate for pre-defined age groups (e.g., icons and visuals for kids, or text links and indexes for adults, etc.)?
5.11 Is attention paid to the needs of the disabled (e.g., text versions of sound files for the audio impaired, etc.)?
5.12 Are a variety of media employed to support learning modes (e.g., visual, aural, numerical, verbal)?
5.13 Is the site English only or can speakers of other languages access the site in their languages?
5.14 Can the treatment employed be generalized to an appropriate range of situations (e.g., case based, real-world samples in addition to theoretical conjectures, etc.)
5.15 Has an appropriate treatment been applied (e.g., game, simulation, tutorial, etc.) to meet the objectives?
5.16 Is interactivity employed (e.g., can users click or input an answer and receive feedback, have an opportunity to practice what is presented, etc.)?
5.17 Is the site designed to support group use or is it more individually based?
5.18 Is content structured to be accessible during a single class period (30 or 40 minutes)?
5.19 Are use strategies or lesson plans provided to assist teachers in using the document?

From http://itech1.coe.uga.edu/Faculty/GWilkinson/criteria.html (continued)

Criterion 6: Relevance and Scope of Content

The quality of the information within a document is related to the needs of the user. Relevance and Scope of Content deals with the information in the document and whether it meets the user's needs in terms of type and depth of the material provided, whether it complements other information available, or leaves gaps, and whether it fits into the broader field of knowledge.

- 6.1 Is the content related to the user's needs?
- 6.2 Is the information sufficiently current to meet the user's needs?
- 6.3 Is the coverage of the topic sufficiently broad to meet the user's needs?
- 6.4 Does the document provide any new information on the topic?
- 6.5 Are there any obvious gaps or omissions in the coverage of the topic?
- 6.6 Is the document integrated within a broader context or field of knowledge?

From http://itech1.coe.uga.edu/Faculty/GWilkinson/criteria.html (continued)

Criterion 7: Validity of Content

Validity of Content deals with the confidence one can place in the information in a document, such as identification of the methods used in obtaining the information, whether the author(s) cite their original sources for secondary information, whether the document has been peer reviewed, and whether the author(s) offer verifiable statistics to support their claims.

- 7.1 Is the methodology used to develop the resource described and appropriate to the content?
- 7.2 Has the document been linked to or referenced by a recognized authority?
- 7.3 Has the document been subjected to a peer review process?
- 7.4 Is the document a primary (original, unfiltered material) or secondary (modified, selected, or rearranged information about primary materials) source?
- 7.5 Does the information provided contradict or confirm the information from other sources?
- 7.6 Does the author provide a bibliography or cite references to confirm the accuracy of the information?
- 7.7 Does the author provide verifiable statistics to support conclusions?
- 7.8 Does the author follow a recognized style manual to cite references and quoted materials?
- 7.9 Is the site maintained by a university, governmental agency, or other reputable organization?

From http://itech1.coe.uga.edu/Faculty/GWilkinson/criteria.html (continued)

Criterion 8: Accuracy and Balance of Content

Accuracy and Balance of Content deals with the evidence of bias or inaccuracy in a document. Evidence of bias includes such things as obviously misleading statements or outrageous, unsupported claims made by the author(s), sponsorship by individuals or groups with vested interest in the topic, or one-sided arguments about controversial issues. Evidence of inaccuracy includes obvious hasty preparation and inconsistent quality.

- 8.1 Are there any obvious errors or misleading omissions in the document?
- 8.2 Are all sides of controversial issues presented, or is it necessary to seek alternative views?
- 8.3 If the document deals with controversial issues, is the bias of the author clearly identified?
- 8.4 Is the site sponsored or cosponsored by an individual or group that has an established position regarding the issues discussed in the document?
- 8.5 Does the author or the sponsor of the site have a vested or commercial interest in the topic?
- 8.6 Are there indications of careless or hasty preparation, such as spelling or grammatical errors?
- 8.7 Is the information presented in the document of a consistent quality?
- 8.8 Are there indications of gender or racial biases and stereotyping in text or graphics?

From http://itech1.coe.uga.edu/Faculty/GWilkinson/criteria.html (continued)

Criterion 9: Navigation Within the Document

Judgments about the quality of Internet resources are based on the usability and interactivity of the documents as well as on the quality of the information within the documents. Navigation Within the Document deals with how easily documents are explored and is concerned with organizational structures, menu design, indexes, tables of content, search functions, and online "help."

- 9.1 Is there a good organizational scheme (e.g., by subject, format, audience, chronology, geography, authors, etc.)?
- 9.2 Is there provision for topic narrowing via conventions such as menus that follow the organizational scheme?
- 9.3 Is there an image map that can be used to navigate within the document?
- 9.4 Is there an index that can be used to navigate within the document?
- 9.5 Is there a table of contents that can be used to navigate within the document?
- 9.6 Is there a built-in search function within the document?
- 9.7 Is there a consistent sense of context or understanding of position within the document at any given time?
- 9.8 If linking to another page, is there a way to get back to the home page?
- 9.9 Is it easy to locate a particular page from any other page?
- 9.10 Is the information on individual pages concise, or is lengthy scrolling required?
- 9.11 Is there a system of "help" for those requiring it?
- 9.12 How helpful is the "help" system?

From http://itech1.coe.uga.edu/Faculty/GWilkinson/criteria.html (continued)

Criterion 10: Quality of the Links

One of the distinguishing aspects of hypertext-based Internet resources is the ability to link a document with related materials or resources. This aspect is sufficiently important to be evaluated separately from other organizational characteristics. Quality of the Links deals with how useful links are (are they just lists of lists or are they pointers to more substantive information?) and how clearly they are marked or annotated.

- 10.1 Are the links clearly visible and understandable?
- 10.2 Do essential instructions appear before links and other interactive portions?
- 10.3 Are users informed when they are about to link off the site containing the document?
- 10.5 Are users informed of the type of file they are linking to (e.g., video, sound, text, etc.)?
- 10.6 Are users informed of the type of information they are linking to (e.g., definitions, elaboration, example, etc.)?
- 10.7 Are links provided primarily to resources rather than just lists of resources?
- 10.8 Are the links evaluated in any way prior to inclusion?
- 10.9 What are the link selection criteria, if any?
- 10.10 Are the links relevant and appropriate to the document?
- 10.11 What do the links offer that is not easily available in other resources?
- 10.12 Are there links to an appropriate range of Internet resources (e.g., links to gophers)?
- 10.13 How reliable are the links (are there inactive links or references to sites that have moved)?

From http://itech1.coe.uga.edu/Faculty/GWilkinson/criteria.html (continued)

Criterion 11: Aesthetic and Affective Aspects

A medium that is capable of presenting information in a variety of formats creates the necessity of making quality judgments that go beyond the limits of text. Aesthetic and Affective Aspects deal with how well the document is designed in terms of graphics, readability, and the use of creative elements. This category specifically deals with the "feel" of the document, such as how much "fun" it is, how "pretty" it is, and other aesthetic and affective dimensions.

- 11.1 Does the document follow accepted graphic design principles (e.g., balance, unity, proportion, simplicity, etc.)?
- 11.2 Does the document follow accepted text design principles (e.g., appropriate use of headers, limited mix of type styles and sizes, etc.)?
- 11.3 Are readability and legibility guidelines followed (e.g., sufficient color and tone contrast between text and background, font size, doesn't use all caps, etc.)?
- 11.4 Does the document show evidence of originality and creativity in the visual design and layout?
- 11.5 Do the creative elements enhance the usability and appeal of the document?
- 11.6 Does the use of color add to the visual appeal of the document?
- 11.7 Does the use of pictures or graphics add to the visual appeal of the page?
- 11.8 Does the interface make use of consistent menu conventions from screen to screen (e.g., terminology, icons, positioning on page, etc.)?
- 11.9 Is the design so complex that it detracts from the content?
- 11.10 If information is arranged in columns, does the page exceed a single screen?
- 11.11 Does the use of time dependent media (e.g., animation, sound, video. etc.) contribute to the affective appeal of the document?
- 11.12 Does the document stimulate the user's creativity or thinking?
- 11.13 Does the resource attract and maintain the user's attention (e.g., use of humor, active responding, feedback, etc.)?

Example 3

From http://www.cyberbee.com/guide1.html
WWW CyberGuide Ratings for Content Evaluation

Title of site:_____
Subject of site:_____
URL (address):_____
Considered for use with (class & grade level):_____
Specific objective for using this site:
_____
_____
_____
Notes on possible uses of this site and URL's for individual site pages:_____
_____
_____

Evaluate the Web site you are considering for instructional use according to the criteria described below. Circle the number which you feel the site deserves for each category: 5 = Excellent and 1 = Poor.

1. Speed
   - -The home page downloads efficiently enough to use during whole class instruction. 5 4 3 2 1
   - -The home page downloads efficiently enough to keep students on task during independent/small group study. 5 4 3 2 1
2. First impression - general appearance
   - -The home page is designed attractively and will entice my students to further exploration. 5 4 3 2 1
   - -The home page is designed clearly enough to be successfully manipulated by my intended users. 5 4 3 2 1
3. Ease of site navigation
   - -My students will be able to move from page to page, link to link, item to item with ease, without getting lost or confused. 5 4 3 2 1
   - -All links are clearly labeled and serve an easily identified purpose. 5 4 3 2 1
   - -Links provided to other pages and sites operate efficiently enough to keep my students on task. 5 4 3 2 1
4. Use of graphics/sounds/videos
   - -The graphics/sounds/videos are clearly labeled, clearly identified. 5 4 3 2 1
   - -The graphics/sounds/videos serve a clear purpose appropriate for my intended audience. 5 4 3 2 1
   - -The graphics/sounds/videos will aid my students in reaching the desired objectives for using this site. 5 4 3 2 1

5. Content/Information

- This site offers a wealth of information related to my stated objectives. 5 4 3 2 1
- The information is clearly labeled and organized, and will be easily understood by my students. 5 4 3 2 1
- The content of the linked sites is worthwhile and appropriate for my intended audience. 5 4 3 2 1
- The content of linked sites adds to the value of this site for achieving my instructional goals. 5 4 3 2 1
- The information providers are clearly identified. 5 4 3 2 1
- The information providers are reliable. 5 4 3 2 1
- The content is free of bias, or the bias will be clearly recognized by my students. 5 4 3 2 1
- This site provides interactivity which increases its instructional value. 5 4 3 2 1

6. Currency - The site was recently revised. 5 4 3 2 1

7. Availability of further information

-A contact person or address is readily available. 5 4 3 2 1

8. Add the total number of points you awarded to this site and determine your overall WWW Cyberguide rating. For any specific category that did not apply to this site, deduct five points from the total possible points.

____WWWWW's = (100-91 points) - This site is so well-designed, and so effectively meets my instructional goals, that I can provide my students with general instructions and allow free exploration.

____WWWW's = (90-76 points) - This site contains good material but a site map with specific directions will assist my students in reaching the stated objectives.

____WWW's = (75-61 points) This site contains information that will make stops at designated points worthwhile, but students will need more structured guidance to reach my instructional goals. A list of bookmarks to specific pages and/or links is advisable, as is frequent discussion of student progress.

____WW's = (60-46 points) Although useful information exists at this site, its most effective contribution to my objectives will be in whole-class instruction where I can guide exploration and keep students on task.

____W = (45-31 points) This site contains a few pieces of information that make it a possible alternative when other sources are not readily available. Supervised student use is advised.

Example 4

The following is from http://itech1.coe.uga.edu/Faculty/GWilkinson/webeval.html (under downloadable evaluation in PDF format)

Internet Information Evaluation Form

Document URL: http://

Document Title:

Author's Name and position:

Individual/group/organization that sponsors and/or hosts the site?

DIRECTIONS: Answer the questions for each category and THEN give a rating from 1 to 5 for each.

CREDIBILITY:	**1**	**2**	**3**	**4**	**5**
	P O O R		**AVERAGE**		**EXCELLENT**

Is the author's position, training, and/or experience appropriate to the topic of the document?
Are there any obvious errors or misleading omissions in the document?
Does the author or site sponsor have a vested or commercial interest in the topic?
Is the information current and up-to-date?

ORGANIZATION:	**1**	**2**	**3**	**4**	**5**
	P O O R		**AVERAGE**		**EXCELLENT**

Is the scope and purpose of the document clearly stated?
Is there an effective organization scheme for the document (e.g., by subject, format, audience, etc.)?
Is there a table of contents or index that can be used to navigate this site?
Are references, bibliographies, or other supporting evidence provided?

LINKS:	**1**	**2**	**3**	**4**	**5**
	P O O R		**AVERAGE**		**EXCELLENT**

Do the links show evidence of careful selection and/or evaluation?
Are the links relevant and appropriate to the topic of the document?
Are links described so that you know what you are linking to?
How reliable are the links (are there inactive links)?

GRAPHICS:	**1**	**2**	**3**	**4**	**5**
	P O O R		**AVERAGE**		**EXCELLENT**

Does the use of graphics, photos, or video/audio clips contribute to your understanding of the information?
Does the visual design enhance usability and understanding or is it distracting?
Do you have any difficulty reading the text (sufficient contrast, adequate print size, etc.)?
Does the design of the document/site make is easy to locate information needed for evaluative judgments?

OVERALL RATING:	**1**	**2**	**3**	**4**	**5**
	P O O R		**AVERAGE**		**EXCELLENT**

How well does this document/site address your problem or meet your information needs?

Example 5

The following is from: http://thorplus.lib.purdue.edu/vlibrary/

Internet Evaluator Checklist

AUTHOR

Who is the author of the piece?

Is the author the original creator of the information?

YES
NO
CAN'T TELL

Does he or she list his or her occupation, years of experience, position, or education? If so, list below:

With this information or lack of it, do you feel this person is qualified to write on the given topic?

YES
NO

If yes, why?

LOCAL INSTITUTION OR HOME PAGE

What institution (company, government, university, etc.) or Internet provider supports this information?

If it is a commercial Internet provider, does the author appear to have any affiliation with a larger institution?

YES
NO

If it is an institution, is it a national institution?

YES
NO

Does the institution appear to filter the information appearing under its name?

YES
NO

Does the author's affiliation with this particular institution appear to bias the information?

YES
NO

DOCUMENT INFORMATION

When was the is information created or last updated?

What appears to be the purpose for this information? (explain)

Inform

Explain

Persuade

CONCLUSION

Given all the information you determined from above, is this piece of information appropriate for your topic?

YES

NO

If yes, explain your decision and any reservations you would tell someone else using this information.

Example 6

The following is from: http://gateway.lib.ohio-state.edu/tutor/les1checklist.html

Web Site Evaluation Checklist

Directions	**Check the box if:**
Consider relevance for the research topic	☐ Site is irrelevant
Next, learn more about the site's author, publisher, purpose, currency	☐ Site meets its stated intent ☐ Author has appropriate credentials ☐ Publisher recognizes this page ☐ Site has up-to-date information
Now examine the content more carefully	☐ Content is not biased or slanted
Compare the page to site(s) with similar content.	☐ Compared to the others, this site offers broad and balanced coverage of the topic
Finally, look for evidence of recognition by others. Do an advanced search in the Alta Vista index to get a sense of how many other pages are linking to this web site. *Example:* Animal Rights Resource Sight *Search:* anchor:animal rights resource site	☐ Site is recognized as significant

Count the number of boxes you checked.

Your score for this site:
- 6 - 8 points - you found a winner!
- 3 - 5 points - questionable, may be useful for some projects
- 0 - 2 points - look for a better source

Example 7

Web Site Evaluation Techniques

Evaluation Criteria	Questions and Techniques
Relevance	**Questions:** Does this site provide the type of information I need? **Techniques:** Look for a Site Index, Site Map or Table of Contents page to get a quick sense of what's available.
Purpose	**Questions:** Is the purpose to inform or provide news, to explain or document, to persuade, advocate, or sell? **Techniques:** Examine "About this site" pages for an indication of intent.
Authority	**Questions:** Does the author have appropriate education, training, or experience to write with authority on this topic? **Techniques:** Look for a linked biographical statement, resume, or background on the organizational "author." Check for other writings by or about this author (use the Library's online catalog or online periodical indexes).
Publisher or host	**Questions:** Is this an official or unofficial site? Does the Internet host site or "publisher" offer links back to this site from its own pages? **Techniques:** Follow links back to host site page or enter URL for the top level domain.

Content accuracy, bias	**Questions:** Are the sources of information presented at the site clearly indicated? What types of resources are used to support arguments? Does the author attempt to substantiate controversial claims? Are there references to alternative points of view? Is the author affiliated with any organization that may have a "vested interest" in the topic? **Techniques:** Examine linked sources to determine if they present a balanced point of view or substantiate claims. Compare to other web sites or to online/printed resources on the same topic.
Coverage	**Questions:** Do other sites cover topics or aspects that are missing from this site? **Techniques:** Compare to other web sites on the same topic.
Currency	**Questions:** Can you tell when material was written? Is the site well maintained (e.g. links functional)? Is there evidence of newly added information or links? **Techniques:** Look at page creation, revision dates. Check any "What's New" pages.
Recognitions	**Questions:** Has this site been generally recognized by others as reliable, either in reviews, comments, or by the implicit acknowledgment of others linking to it? How did you locate it initially - from a reference in an online "guide" source or by a keyword search? **Techniques:** Look at any formal evaluations or reviews of the site. Search for other sites which have linked to this page.

Section V: Bibliography; On-line Bibliographies

Sites Used in the Preparation of this Guidebook

These sites are listed by address, rather than using a standard bibliographic structure to make it easier to find the sites. The publisher is identified to provide credibility.

www.albany.edu/library/internet/evaluate.html

The University at Albany Libraries offers a concise, sound structure for evaluating web sites. Some of the questions work equally well for evaluating information.

www.clearinghouse.net/ratings.html

The Argus Clearinghouse is a widely cited ratings system for web sites. This is the Argus description of the system.

www.cl.utoledo.edu/userhomes/maked/evaluation.html

The University of Toledo Library system has a very good discussion on evaluation of information and evaluation of web sites. Within the larger site, (at the address following edu/, change to ref_sources/refindex.html) there are some good on-line resources identified.

www.cnet.com/Content/Features/Dlife/Truth/ss07.html

CNET offers an excellent discussion on "truth-seeking on the Net" at this address. The article presents several good critical thinking strategies for net searchers.

Itech1.coe.uga.edu/Faculty/GWilkinson/criteria.html

Gene L. Wilkinson, Lisa T. Bennett and Kevin M. Oliver are in the Department of Instructional Technology at the University of Georgia. This site provides comprehensive criteria they use in judging the quality of web resources. This structure includes 11 criteria with several subquestions for each criterion.

www.dartmouth.edu/~biomed/workshops/search.htmld/evaluation.html

The Biomedical Libraries of Dartmouth College have a good, accessible site that lays out the criteria they use in evaluating sites for possible linkages or descriptions.

www.davisref.samford.edu/ls507/sizingup.htm

Donna Fitch from Samford University's Davis Library reproduced the article "Sizing up sites: How to judge what you find on the web" by Ann K. Symons and added links in the article and links in the bibliography. Very useful. The article is from the School Library Journal and information on the journal can be found at "www.bookwire.com/slj/".

//gateway.lib.ohio-state.edu/tutor/

The Ohio State University Libraries has a very thorough and user-friendly tutorial for searching the web. This site includes basics of searching, evaluation guides, web indexes (including a matrix of what they can each do), and other useful information for net users.

//info.lib.uh.edu/pr/v8/n3smit8n3.html

The University Libraries at the University of Houston have an excellent article (referred) on evaluating information resources. It includes a rating system and has good citations.

www.library.ucla.edu/libraries/college/instruct/instigui.htm

This is a page from the University of California, Los Angeles that is a "help guide" for the students. The section on "Internet Searching and Evaluation" has several links to some very good information. Especially good for evaluation is the link to the page on thinking critically about WWW resources.

www.llrx.com/columns/quality.htm

This is the Law Library Resource Xchange and has good questions about the quality of information and questions about publishers/authors. Uses links to show examples and provides some suggested readings.

milton.mse.jhu.edu:8001/research/education/net.html

At John Hopkins University, the Milton S. Eisenhower Library has a very solid discussion of evaluating information found on the Internet.

www.sccu.edu/faculty/R_Harris/evalu8it.htm

Dr. R. Harris from Southern California college presents a fairly comprehensive structure for evaluating web sites and information. Includes the "CARS" checklist of Credibility, Accuracy, Reasonableness, and Support.

www.science.widener.edu/~withers/webeval.htm

An excellent web-site evaluation tutorial from the Wolfgang Memorial Library at Widener University. Thorough and understandable.

//thorplus.lib.purdue.edu/rese...lasses/gs175/3gs175/evaluation.html

The Purdue University Library offers a checklist for web site evaluation and a checklist for content.

www.udmercy.edu/htmls/Academics/library/webpage

The Libraries/Media Services of the University of Detroit Mercy has a really thorough discussion on evaluating Internet resources. Good basis for consideration and succinct.

www.uflib.ufl.edu/hss/ref/tips.html

From the George A. Smathers Libraries of the University of Florida is a page of "tips" for evaluating searches on the web. Some really good, sound tips— may be simplistic for some, but a great place to start.

www.uwec.edu/Admin/Library/10cs.html

The McIntyre Library of the University of Wisconsin-Eau Clair presents the "Ten C's" evaluating internet resources. Good, clear points for consideration.

www.vuw.ac.nz/~agsmith/evaln/index.htm

This is an excellent structure (as the author says, a "toolbox") for evaluating internet information sources. It is supported by Victoria University of Wellington, New Zealand.

On-line Bibliographies

davisref.samford.edu/ls507/sizingup.htm

Donna K. Fitch maintains this site from Samford. It includes a good link section to sites about internet evaluation.

//info.lib.uh.edu/pr/v8/n3/smit8n3.html

The University of Houston provides a series of links to on-line evaluation sites prepared by Dr. Alastair Smith from the Victoria University of Wellington, New Zealand.

//refserver.lib.vt.edu/libinst/critTHINK.HTM

Nicole Auer, the Library Instruction Coordinator at the Virginia Polytechnic Institute and State University has an *excellent* on-line bibliography (with links) for web site evaluation. The bibliography includes articles from journals and dates when each site was visited by the author.

www.vuw.ac.nz/~agsmith/evaln/evaln.htm

This is part of the "Information Quality WWW Virtual Library" maintained by Alastair Smith. This is the broader version of the links maintained by the University of Houston.